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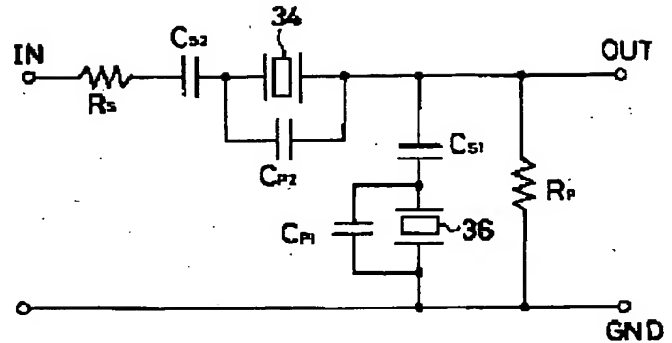
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TITLE : PIEZOELECTRIC FILTER



**ABSTRACT :** PURPOSE: To provide the piezoelectric filter with excellent economical efficiency which can have its resonance frequency and antiresonance frequency easily set to specific values by connecting capacitors in series and in parallel to a piezoelectric resonator.

CONSTITUTION: Piezoelectric resonators 34 and 36 are connected in a ladder shape to form the piezoelectric filter. The capacitors  $CS_2$  and  $CP_{12}$ , and  $CS_1$  and  $CP_1$  are connected to the resonators 34 and 36 in series and in parallel and those are constituted on one dielectric substrate. The resonance frequency and antiresonance frequency of a resonance circuit can be controlled by adjusting the electrostatic capacities of the capacitors  $CS_2$  and  $CP_{12}$ , and  $CS_1$  and  $CP_1$  when the dielectric material of the capacitor substrate is selected and the area of the electrode is adjusted. Consequently, the excellently economical piezoelectric filter is obtained which does not require complicated preprocesses such as an inverse polarizing process, an external shape machining process, and a thermal ageing process and facilitates frequency adjustments.

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